

REMARKS

In response to the above-identified Office Action, Applicant has amended claims 3, 5 and 6 in order to clarify the claimed invention for distinguishing over the prior art. Claims 1-2 and 8 have been cancelled.

The present invention is directed to mechanisms for converting an existing valve/housing combination to provide flow meter functionality. This is accomplished by using the current position of the movable valve member and the differential pressure across the valve housing. That is, the position of the movable valve member is used as a variable which, in combination with the measured differential pressure, is used to calculate flow rate.

The Examiner cites Blann as having the claimed limitations “except for the structure related to the positioning of the pressure ports and the removal of plugs or the means for providing information relating to the optimal placement for the differential pressure measurement across the valve housing or means adapted to provide current position of the valve” as to which the Examiner indicates that such elements would be obvious to a person skilled in the art. However, Blann does not appear to contain any teachings in which the current position of the valve is used to calculate flow rate. In particular, Blann et al. teaches at column 5, line 54:

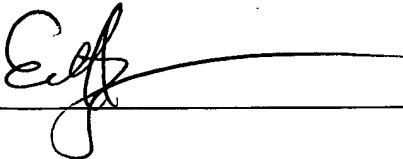
“The orifice 54 in combination with the first and second differential port 57 and 58 serves as a main flow sensor which cooperates with the main valve [12] so as to receive fluid flow passing through the main valve to reflect flow rate therethrough as is well-known.” That is, flow rate is determined by orifice 54 in combination with the first and second differential ports 57 and 58 serving as a flow sensor. However, Blann et al. does not teach or suggest that the position of the valve, in particular, movable valve member 34, is used to determine flow rate.

In other words, the present invention, as claimed, is directed to an apparatus for converting an existing valve for use as a flow meter. While Blann et al. teaches that its third embodiment (FIG. 6) is appropriate for use in a retro-fit situation, it should be noted that Blann et al. is mainly directed to a pilot valve apparatus for use in an automatic fluid control system for maintaining pressure downstream from a main control valve. The present invention is concerned with a single valve and not a pilot valve apparatus for use with a main control valve.

In view of the foregoing, reconsideration and withdrawal of the rejection of claims 3-13 and 15 under 35 U.S.C. § 103(a) as being unpatentable under Blann et al. is requested.

Respectfully submitted,
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